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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/663,659	09/15/2000	Malcolm G. Smith SR.	ULT-005-2C2P	2182
22888	7590	06/21/2004	EXAMINER	
BEVER HOFFMAN & HARMS, LLP TRI-VALLEY OFFICE 1432 CONCANNON BLVD., BLDG. G LIVERMORE, CA 94550			TAYLOR, APRIL ALICIA	
			ART UNIT	PAPER NUMBER
			2876	

DATE MAILED: 06/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/663,659

**Applicant(s)**

SMITH ET AL

**Examiner**

April A. Taylor

**Art Unit**

2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 32,53 and 66-106 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 32,53 and 66-106 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                                        |                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8</u> . | 6) <input type="checkbox"/> Other: _____                                                |

### DETAILED ACTION

1. Receipt is acknowledged of the Amendment filed 26 January 2004.

#### *Claim Objections*

2. Claims 53, 67, 97, and 98 are objected to because of the following informalities:  
Re claim 53: Substitute "said at least one layer" with – said layer – (see lines 18-19).

Re claim 67: Substitute "adapted to clean" with – for cleaning – (see line 2).

Re claim 97: Substitute "The data unit" with – The system – (see line 1).

Re claim 98: Substitute "The data unit" with – The system – (see line 1).

Appropriate correction is required.

3. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 75-105 have been renumbered 76-106, respectively.

For example: On page 9 of the amendment filed 1/26/04, claims 75 and 76 should be written as:

Claim 76. The data unit of claim 73, wherein said protective coating comprises...

Claim 77. The data unit of claim 76, wherein the data card further comprises...

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 32, 66, 70, 71, 79, 87, 99, and 100 are rejected under 35 U.S.C. 102(e) as being anticipated by Hirasawa (US 6,250,552).

Re claims 32, 98, and 99: Hirasawa teaches a data unit system comprising:

a data card including a non-magnetic substrate comprising magnetic material layer for storing magnetic signals; and

a data card reader comprising a base; a substrate support mounted to the base for controlling movement of the data card along a first path; first and second data head support surfaces positioned at opposite ends of a second path and adjacent to the substrate support, the first and second paths being transverse to one another; and a data head drive mounted to the base, the data head drive having a data head reciprocally movable over the first and second data head support surfaces, wherein movement of the data card along the first path positions the data region of the data card

for signal communication with the data head during the movement of the data head along the second path. (See col. 3, line 44 to col. 9, line 15)

Re claim 66: Hirasawa teaches wherein the first and second paths are perpendicular (see col. 5, line 5+).

Re claim 70: Hirasawa teaches wherein the data head contacts the data card during the signal communication (see col. 5, line 1 to col. 9, line 15).

Re claim 71: Hirasawa teaches wherein the data head contacts the first and second data head support surfaces during movement of the data head along the second path (see col. 5, line 1 to col. 9, line 15).

Re claim 79: Hirasawa teaches wherein the data head does not contact the data card during the signal communication (see col. 5, line 1 to col. 9, line 15).

Re claim 87: Hirasawa teaches wherein the second path is arcuate (see col. 5, line 1 to col. 9, line 15).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 53, 72-76, 80-85, 88, 89, 90-93, 95-98, and 101-106 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirasawa (US 6,250,552) in view of Shiroishi et al (US 5,147,732), hereinafter Shiroshi.

Re claims 53, 72, 73, 80, 81, 88, 89, 101, and 102: Hirasawa discloses a card and card writer/reader system comprising:

an encodeable card having a non-magnetic substrate; and

a card writer/reader having a data head for at least one of writing encoding signals in the magnetic storage material layer and reading encoded signals from the magnetic material during relative movement of the data head and the magnetic storage material layer; and a moveable card support to which the non-magnetic substrate is coupled during the writing or reading, the card support being moveable in a direction perpendicular to the relative movement of the data head and the magnetic storage material layer. (See col. 3, line 44 to col. 9, line 15)

Hirasawa fails to specifically teach or fairly suggest wherein the card includes a layer of high-density magnetic storage material, and an abradable protective coating formed over the layer of the high-density magnetic storage material layer.

Shiroishi discloses a data card having a layer of high-density magnetic storage material, and an abradable protective coating formed over the layer of the high density magnetic storage material layer (see col. 1, line 6 to col. 7, line 13; and col. 7, line 45 to col. 10, line 65). In view of Shiroishi's teaching, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to use the notoriously old and well known data card having a layer of high density magnetic storage material, and an abradable protective coating formed over the layer of the high density magnetic storage material layer to the teachings of Hirasawa in order to improve

the signal to noise ratio, reducing the intrinsic media noise at high linear recording density.

Re claims 74-76, 82-85, 90-93, 95-98, and 103-106: Hirasawa fails to specifically teach or fairly suggest wherein the protective coating comprises at least two layers, wherein one of the layers include a magnetically permeable, magnetically saturable material and another of the layers is a non-magnetic layer formed over the magnetically permeable, magnetically saturable material and wherein the magnetically saturable material being responsive through the non-magnetic layer to produce a magnetic image field.

Shiroishi discloses a data card having a protective coating comprising at least two layers, wherein one of the layers include a magnetically permeable, magnetically saturable material and another of the layers is a non-magnetic layer formed over the magnetically permeable, magnetically saturable material and wherein the magnetically saturable material being responsive through the non-magnetic layer to produce a magnetic image field (see col. 1, line 6 to col. 7, line 13; and col. 7, line 45 to col. 10, line 65). In view of Shiroishi's teaching, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to use the notoriously old and well known data card having layers of material as describe in the claims to the teachings of Hirasawa in order to enhance read and write efficiency in high linear recording density and obtain high read output.

8. Claims 67-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirasawa (US 6,250,552) in view of Yoshida (US 4,006,507). The teachings of Hirasawa have been discussed above.

Hirasawa fails to teach or fairly suggest a reader having a cleaning roller for cleaning a data card.

Yoshida discloses a reader having a cleaning roller for cleaning a data card (see col. 1, line 57 to col. 3, line 25). In view of Yoshida's teaching, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ the notoriously old and well known reader having a cleaning roller to the teachings of Hirasawa in order to prevent reading errors or failure.

9. Claims 78, 86, and 94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirasawa (US 6,250,552) as modified by Shiroishi et al (US 5,147,732), and further in view of Yoshida (US 4,006,507). The teachings of Hirasawa as modified by Shiroishi have been discussed above.

Hirasawa as modified by Shiroishi fail to teach or fairly suggest wherein the data card reader includes a data card cleaner.

Yoshida discloses a reader having a data card cleaner. In view of Yoshida's teaching, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ the notoriously old and well known card cleaner to the teachings of Hirasawa as modified by Shiroishi in order to prevent reading errors or failure.



***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Pat. No. 6,053,406 to Litman

US Pat. No. 5,808,981 to Suzuki

US Pat. No. 5,428,213 to Kurihara

US Pat. No. 5,099,372 to Kadokura et al

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to April A. Taylor whose telephone number is (571) 272-2403. The examiner can normally be reached on Monday - Friday from 6:30AM - 4:00PM.

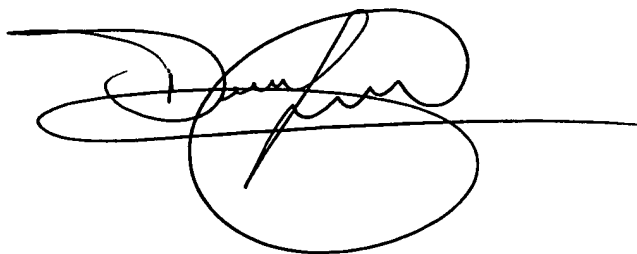
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [april.taylor@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AAT  
14 June 2004

A handwritten signature in black ink, featuring a large, stylized 'S' or 'L' shape with a horizontal line extending to the right.